

Product datasheet for **MG207518**

Terf2 (BC046284) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Terf2 (BC046284) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Terf2
Synonyms:	TRF2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG207518 representing BC046284
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCTGCGGGAGCCGGGACAGCGGGCCCTGCTTCCGGCCGGGGCTTGTGCGTGACCCGATGGCGTCAC
 AGCCAAGGAAACGGCCAGTCGGAGGGCGGGGAGGGCGGGGAGGGCGAGCGCGGTGCGAACACGATGGC
 GGGAGGAGGCGGGAGCAGCGATAGCAGCGGGCGGGCGGCGAGCCGACGGGCATCGCGCAGCGCGGGCGG
 GCTCGACGGGGCGACACGAGCCAGGGTTGGGAGGCGCGGCCGAGCGGGCGCGGGGAAGCTCGCCTGG
 AGGAGGCGGTCAACCGCTGGGTGCTCAAGTTCTATTTCCACGAGGCGCTGCGGGCCTTTCGGAGTAGCCG
 GTACCGGGACTTCAGGCAGATCCGGGACATCATGCAGGCGTTGCTTGTGAGGCCCTTGGGAAGGAGCAT
 ACGGTGTCCCGTTGCTGCGGGTATGCAGTGTCTGTCGCGCATTGAAGAAGGAGAAAATTTAGACTGTT
 CCTTTGATATGGAGGCTGAGCTCACACCCTTGAATCAGCTATCAATGTGCTGGAGATGATTAACACA
 GTTCACACTGACAGACTCTATGGTTGAATCCAGCAGAAAAGTGGTCAAGGAGGCTGCTGTCATTATTTGT
 ATCAAAAACAAAGAATTTGAAAAGGCTTCAAAGATTTTAAAAAATACATGTCTAAGGACCCACAACCT
 AGAAGCTGAGAAGTATCTCTGAACATATCCGGGAAAAGAAGTGGCCACCCCTGTTATCCAGAAGT
 TTCTATGAGGTCTTCCAGCAGAAGATGCTGCGTTTCTAGAGAGCCACCTGGATGACACGGAGCCCTAC
 CTCCTCACGATGGCTAAAAAGCTTTGAAATCTGAATCAGCTGCTTCAAGTACAATGAGGGAAGAAAAGC
 ACCCAGAGCCAGTGAAAAACCCTTAGAGAGCCTCAAGCAGACAGCCTCAGAACCCTCCAGCCACCAT
 CGGGATCAGGACTCTGAAGGCAGCTTCAAAGCTCTGTCTACTGCACAAGACTCAGAGGCCGCTTTTGCA
 AAAGTGGACGAAAGATCTGGTACTTGTAACTGGCATCCCCATCATCACCAGCCACAACACAAGA
 GACCCAGGAAAGATGAACATGAAAGCGCAGCTCCTGCTGAGGGTGAGGGAGGCTCAGACCCGACCCAGC
 GAACAGTCCCATGACAATAAGCAGATTGCTGTTGGAGGAGGACAGCCAGAGTACTGAGCCAGCCAGGC
 CTCAACTCTCCACGAGGCCATGTCAGCATCCAAGCCAGAGCTCTCAACCAACCCACCCGGGGGAGA
 AGAAGCCCAAGTATGAAGACCTTCTTTGTAGGAGTTTGGGGGCTGGTTGGCGGGCCTGGTTGGCCTGGT
 TTTACTTCCA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG207518 representing BC046284
 Red=Cloning site Green=Tags(s)

MAAGAGTAGPASGPGVVRDPMASQPRKRPSREGGEGGEGERRSNTMAGGGSSDSSGRAASRRASRSGGR
 ARRRGRHEPGLGGAERGAGEARLEEA VNRWVKFYFHEALRAFRRSSRYRDFRQIRDIMQALLVRPLGKEH
 TVSRLLRVMQCLSRIEEENLDCSFDMEAE LTPLESAINVLEMIKTEFTLTDSMVESSRKLVKAAV IIC
 IKNKEFEKASKILK KYMSKDPTTQKLRTDLLNI IREKNLAHPVIQNF SYEVFQQKMLRFLESHLDDTEPY
 LLTMAKKALKSESAASSTMREEKHPEPVEKPLREPPSRQPQNPPATIGIRTLKAAFALSTA QDSEAAFA
 KLDQKDLVLANL ASPSSPAHKHKRPRKDEHESAAPAE GEGSDRQPRNSPMTISRLLLEEDSQSTEPSPG
 LNSSHEAMSASKPRALNQPHPGEKKPKYEDLLCRSLGAGWRAWLGLVLLP

TRTRPLE - GFP Tag - V

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: BC046284

ORF Size: 1410 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [BC046284](#), [AAH46284](#)

RefSeq Size: 2539 bp

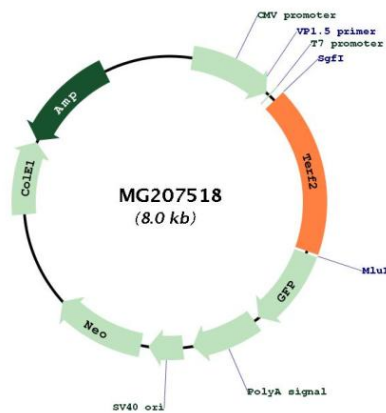
RefSeq ORF: 1412 bp

Locus ID: 21750

Cytogenetics: 8 53.59 cM

Gene Summary:

Binds the telomeric double-stranded 5'-TTAGGG-3' repeat and plays a central role in telomere maintenance and protection against end-to-end fusion of chromosomes. In addition to its telomeric DNA-binding role, required to recruit a number of factors and enzymes required for telomere protection, including the shelterin complex, TERF2IP/RAP1 and DCLRE1B/Apollo. Component of the shelterin complex (telosome) that is involved in the regulation of telomere length and protection. Shelterin associates with arrays of double-stranded 5'-TTAGGG-3' repeats added by telomerase and protects chromosome ends; without its protective activity, telomeres are no longer hidden from the DNA damage surveillance and chromosome ends are inappropriately processed by DNA repair pathways. Together with DCLRE1B/Apollo, plays a key role in telomeric loop (T loop) formation by generating 3' single-stranded overhang at the leading end telomeres: T loops have been proposed to protect chromosome ends from degradation and repair. Required both to recruit DCLRE1B/Apollo to telomeres and activate the exonuclease activity of DCLRE1B/Apollo. Preferentially binds to positive supercoiled DNA. Together with DCLRE1B/Apollo, required to control the amount of DNA topoisomerase (TOP1, TOP2A and TOP2B) needed for telomere replication during fork passage and prevent aberrant telomere topology. Recruits TERF2IP/RAP1 to telomeres, thereby participating in to repressing homology-directed repair (HDR), which can affect telomere length. [UniProtKB/Swiss-Prot Function]

Product images:

Circular map for MG207518